

**CLAIMS:**

What is claimed is:

- 1 1. A method for adjusting the rate of data transfer  
2 between a high-speed multi-channel tape drive and an  
3 network interface, comprising:
  - 4 determining a maximum throughput capability of the  
5 network interface;
  - 6 selecting a number of active data channels in the  
7 high-speed tape drive, wherein the number of active data  
8 channels is selected to match tape drive throughput to  
9 the maximum throughput capability of the network  
10 interface; and
  - 11 responsive to selecting a number of active data  
12 channels in the tape drive, enabling the selected number  
13 of active data channels and disabling a remainder of the  
14 data channels.
- 1 2. The method in claim 1, further comprising:
  - 2 marking the tape cartridge to identify the method  
3 used to write data, wherein the marking step includes  
4 storing information of which channels were selectively  
5 enabled or disabled during the write process.
- 1 3. The method in claim 2, wherein the information of  
2 which channels were selectively enabled or disabled  
3 during the write process is written into the media  
4 information region of the tape cartridge.

1 4. The method in claim 2, wherein the information of  
2 which channels were selectively enabled or disabled  
3 during the write process is written into a radio  
4 frequency identification chip in the tape cartridge.

1 5. The method in claim 1, wherein adjusting the rate of  
2 data transfer is performed dynamically.

1 6. The method in claim 1, wherein the high-speed tape  
2 drive comprises a single head system using a number of  
3 data channels.

1 7. The method of claim 1, wherein the active data  
2 channels are selectively enabled and disabled as a group.

1 8. The method of claim 1, wherein the active data  
2 channels are selectively enabled and disabled one channel  
3 at a time.

1 9. The method of claim 1, wherein the high-speed tape  
2 drive comprises a multi-head system, each using a number  
3 of data channels.

1 10. The method of claim 9, wherein selecting the number  
2 of active data channels to be enabled and disabled in a  
3 multi-head system is performed on a tape head basis.

1 11. The method of claim 9, wherein selecting the number  
2 of active data channels to be enabled and disabled in a

3 multi-head system is performed on a combination of  
4 channel and tape head basis.

1 12. A system for adjusting the rate of data transfer  
2 between a high-speed multi-channel tape drive and an  
3 network interface, comprising:

4 determining means for determining a maximum  
5 throughput capability of the network interface;

6 selecting means for selecting a number of active  
7 data channels in the high-speed tape drive, wherein the  
8 number of active data channels is selected to match tape  
9 drive throughput to the maximum throughput capability of  
10 the network interface; and

11 responsive to selecting a number of active data  
12 channels in the tape drive, enabling means for enabling  
13 the selected number of active data channels and disabling  
14 a remainder of the data channels.

1 13. The system according to claim 12, further  
2 comprising:

3 marking means for marking the tape cartridge to  
4 identify the method used to write data, wherein the  
5 marking step includes storing information of which  
6 channels were selectively enabled or disabled during the  
7 write process.

1 14. The system according to claim 13, wherein the  
2 information of which channels were selectively enabled or  
3 disabled during the write process is written into the  
4 media information region of the tape cartridge.

1 15. The system according to claim 13, wherein the  
2 information of which channels were selectively enabled or  
3 disabled during the write process is written into a radio  
4 frequency identification chip in the tape cartridge.

1 16. The system according to claim 12, wherein adjusting  
2 the rate of data transfer is performed dynamically.

1 17. The system according to claim 12, wherein the high-  
2 speed tape drive comprises a single head system using a  
3 number of data channels.

1 18. The system according to claim 12, wherein the active  
2 data channels are selectively enabled and disabled as a  
3 group.

1 19. The system according to claim 12, wherein the active  
2 data channels are selectively enabled and disabled one  
3 channel at a time.

1 20. The system according to claim 12, wherein the high-  
2 speed tape drive comprises a multi-head system, each  
3 using a number of data channels.

1 21. The system according to claim 20, wherein selecting  
2 the number of active data channels to be enabled and  
3 disabled in a multi-head system is performed on a tape  
4 head basis.

1 22. The system according to claim 20, wherein selecting  
2 the number of active data channels to be enabled and  
3 disabled in a multi-head system is performed on a  
4 combination of channel and tape head basis.